

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

REC'D 08 JUN 2004

WIPO PCT

Applicant's or agent's file reference JOH/ek Case 18	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/PEA/416)	
International application No. PCTNO 03/00002	International filing date (day/month/year) 07.01.2003	Priority date (day/month/year) 07.01.2002
International Patent Classification (IPC) or both national classification and IPC A23K1/18, A23K1/18		
Applicant NORWEGIAN INSTITUTE OF FISHERIES AND ...		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 7 sheets, including this cover sheet.

☐ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of sheets.

3. This report contains Indications relating to the following items:

I ☒ Basis of the opinion

II ☐ Priority

III ☒ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability



IV ☒ Lack of unity of invention

V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

VI ☐ Certain documents cited

VII ☐ Certain defects in the international application

VIII ☐ Certain observations on the international application

Date of submission of the demand 19.07.2003	Date of completion of this report 04.06.2004
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized Officer Couzy, F Telephone No. +49 89 2399-7503 <div style="text-align: right;">  </div>

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/NO 03/00002

I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

Description, Pages

1-10 as originally filed

Claims, Numbers

1-30 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
☐ the language of publication of the international application (under Rule 48.3(b)).
☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority in written form.
☐ furnished subsequently to this Authority in computer readable form.
☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
☐ the claims, Nos.:
☐ the drawings, sheets:

5. ☒ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

see separate sheet

6. Additional observations, if necessary:

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III. Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

1. The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non-obvious), or to be industrially applicable have not been examined in respect of:

- ☐ the entire international application,
- ☐ claims Nos.

because:

- ☐ the said international application, or the said claims Nos. relate to the following subject matter which does not require an international preliminary examination (specify):
 - ☐ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. are so unclear that no meaningful opinion could be formed (*specify*):
 - ☐ the claims, or said claims Nos. are so inadequately supported by the description that no meaningful opinion could be formed.
 - ☒ no international search report has been established for the said claims Nos. 1,16,23,27
2. A meaningful international preliminary examination cannot be carried out due to the failure of the nucleotide and/or amino acid sequence listing to comply with the standard provided for in Annex C of the Administrative Instructions:
- ☐ the written form has not been furnished or does not comply with the Standard.
 - ☐ the computer readable form has not been furnished or does not comply with the Standard.

IV. Lack of unity of invention

1. In response to the invitation to restrict or pay additional fees, the applicant has:

- ☐ restricted the claims.
 - ☐ paid additional fees.
 - ☐ paid additional fees under protest.
 - ☐ neither restricted nor paid additional fees.
2. ☒ This Authority found that the requirement of unity of invention is not complied with and chose, according to Rule 68.1, not to invite the applicant to restrict or pay additional fees.
3. This Authority considers that the requirement of unity of invention in accordance with Rules 13.1, 13.2 and 13.3 is
- ☐ complied with.
 - ☐ not complied with for the following reasons:
4. Consequently, the following parts of the international application were the subject of international preliminary examination in establishing this report:
- ☒ all parts.

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☐ the parts relating to claims Nos. .

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement**

1. Statement

Novelty (N)	Yes: Claims	1-15, 18-21, 23-26
	No: Claims	16, 17, 22, 27-30
Inventive step (IS)	Yes: Claims	1-15, 23-26
	No: Claims	16-22, 27-30
Industrial applicability (IA)	Yes: Claims	1-30
	No: Claims	

2. Citations and explanations

see separate sheet

Re Item I

Basis of the opinion

1. The set of claims filed by fax of 20/05/2004 is **not** allowable as it introduces subject-matter not present in the application as filed (Art. 34 (2) b PCT). Namely:

- in claims 32-41: the application as filed only provides support for products manufactured using a **combination** of both a cooking and an alkali or acid treatment (see for instance original claims 27-30). Moreover, there is no support for a product according to claim 37, prepared by acid or alkaline treatment of a raw material comprising collagen and bone: Support for the presence of collagen is missing.

1.2 Thus, the current set of claims filed on 20.05.2004 is **not** allowed in the procedure.

1.3 The current examination was therefore carried out **on the basis of the originally filed claims**.

Re Item III

Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

III.1 As claims 1, 16, 23, and 27 were not searched in totality, the current examination only covers claims dependent thereof.

Re Item IV

Lack of unity of invention

IV.1 The separate groups of invention are:

invention 1 (original claims 1-15, 16 (partial) and 23-30 (partial)): process for improving the binding capacity of a fish material, and product thus obtained in combination with another process. Claim 16 appears to be carried out using the same process steps as in claim 1, but for another purpose.

invention 2 (original claims 16 (partial), 17-22 and 23-30 (partial)): process for improving the biological digestibility of a feed product, and product thus obtained in combination with another process. Claim 16 is carried out in a manner which is an alternative to that of claims 17-22.

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They are not so linked as to form a single general inventive concept (Rule 13.1 PCT) for the following reasons, as they cover fully independent processes and the products (partially) obtained therethrough.

IV.2 Please note that claim 16 could in fact just as well be considered as an invention of its own.

Re Item V

Reasoned statement under Art. 35 (2) PCT with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

V.1 Reference is made to the following documents:

- D1: US-A-5 093 474 (GROSSMAN SHLOMO ET AL) 3 March 1992
- D2: US-A-5 484 888 (HOLZER DAVID) 16 January 1996
- D3: WO 99 33924 A (SCOTT ROBERT ;HE XIONGWEI (FR); CADE DOMINIQUE (FR); WARNER LAMBER) 8 July 1999
- D4: DE 200 21 273 U (KLOPFER GERT) 2 August 2001
- D5: 'Was tut der Fisch im Gummibär?' ZFL, vol. 50, no. 1/2, 1999, page 3, 18-19 XP002240702
- D6: CHIE SHIMOSAKA ET AL: 'Changes in the Physical Properties and Composition of Fish Bone Cured in an Acetic Acid Solution' J. HOME ECON. JPN., vol. 49, no. 8, 1998, pages 873-879, XP002240703
- D7: MONTERO P ET AL: 'Gelification of collagenous material from muscle and skin of hake (*Merluccius merluccius* L.) and trout (*Salmo irideus* Gibb) according to variation in pH and the presence of NaCl in the medium' ZEITSCHRIFT FUER LEBENSMITTEL-UNTERSUCHUNG UND -FORSCHUNG, vol. 191, no. 1, 1990, pages 11-15, XP002240704 ISSN: 0044-3026
- D8: US-A-5 853 791 (ROUSSEL HERVE) 29 December 1998
- D9: MONTERO P ET AL: 'Extracting conditions for megrim (*Lepidorhombus boscii*) skin collagen affect functional properties of the resulting gelatin.' JOURNAL OF FOOD SCIENCE, vol. 65, no. 3, April 2000 (2000-04), pages 434-438, XP002240705 ISSN: 0022-1147

V.2 Novelty and inventive step

V.2.1 In contrast to the applicant's statement expressed on the last two paragraphs of

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the first page of his telefax of 18/12/2003, it is not clear at all that it is the binding property of the fish material per se which is increased! In fact, the applicant cites the results on Table 2, but those results were obtained with feed obtained by:

- extracting gelatin from salmon bones, the solid residues being discarded (example 1),
- and then mixing that gelatin extract with the fish meal and additional water.

Thus, current claim 1 (even under its non allowed forms submitted by the faxes of 18/12/2004 and 20/05/2004) is indeed a process for the extraction or liberation of collagen from fish material.

The Applicant apparently by mistake considered claim 1 to include the feature of original claim 5. However, he is reminded, if needed, that what matters is the wording of the claim. Here, claim 1 obviously does not include the feature of claim 5!

V.2.2 Document D1 discloses a process for the extraction of gelatin using water in the range of 40-50°C during hours ("overnight") (see col.2 li.45-47, col.3 li.29-41, col.4 li. 15-16), which also includes alkali and acid treatments. Thus, the products according to claims 27-30 are not new (Art. 33 (2) PCT).

V.2.2 Same also applies to these product claims in light of D2 (col.2 li.36-62, col.5 li.43-45) or D9 (p.435 and 437).

V.2.3 Document D6 discloses the improvement of the digestibility of minerals and the release of collagen from fish bones by acidic treatment, thus takes away the novelty of claims 16, 17 and 22. Additionally, the further technical features found in claims 18-21 do not provide an inventive step in the sense of Art. 33 (3) PCT, as these are obvious options for a man skilled in the art.

V.2.4 The currently available prior art does not teach nor suggest the subject-matter of claims 1-15, since that process is carried out for a different purpose. However, an essential feature of the invention is missing from the wording of that claim, namely that found in claim 5, namely that the gelatinous material is not isolated or extracted from the fish material. For the same reason, the subject-matter of claims 23-26 is also new and involves an inventive step.